REMARKS

The outstanding claims are: 1-3, 7-9, 16, 21, 22, 24, 26 , 27, and 30-36.

The drawing, which was objected to, is corrected as required by the Examiner and a new (complete) set of drawings is included herein together with a red-marked copy of sheet 1 to overcome the objection.

Claims 2, 3, 7-12, 15-16, 21-24, 26, and 28-36 were objected to because of informalities. The outstanding claims are amended herein to overcome the objection, except that applicants respectfully decline to add the limitation called for by the Examiner in connection with claim 22 because, in applicants' view, there is no informality to be rectified by the inclusion of this limitation.

Claim 24 was objected to because of double patenting in view of claim 23. Claim 23 is deleted to overcome the objection.

Claims 16, 21, 26, and 28-29 were rejected under 35 USC 112, first paragraph. The Examiner asserts that claims 16 and 28-29 do not correspond to the flowcharts shown in FIGS. 6A and 6B. It is respectfully submitted that amended claim 16 does correspond to the flowcharts shown in FIGS. 6A and 6B. Since the Examiner did not specify the steps that the Examiner felt are not found in the specification, it is possible that the amended claims are not responsive to the issue that the Examiner had in mind. Therefore, if the Examiner disagrees with applicants' assertion that the amended claims overcome the rejection, applicants respectfully request that the Examiner identify the step or steps in the claims that are not (explicitly or implicitly) shown in the flowcharts.

Claims 1-3, 7-12, 16, 21-24, and 26-36 were rejected under 35 USC 112, second paragraph as being indefinite. The claims are amended in response to the Examiner's comments and, as amended, they are believed to be in compliance with the 35 USC 112, second paragraph requirements.

Claims 1, 15, 27, and 36 were rejected under 35 USC 102(e) as being anticipated by Cimini, Jr. et al, US Patent 6,327,314. Applicants respectfully traverse.

The Examiner states that the reference teaches

> a channel estimation circuit 170 for estimating the channel characteristics of the multicarrier signals from the FFT transformers 1621 1622 using iterative forward processing as recited in claim 1 and also using iterative backward processing, which is feedback from a

> reference generator 175 through signals adjusters 1641 and 1642, a summation device 166, a demodulator 167, and a R-S decoder 168 as recited in claims 27, wherein the transformed multicarrier signals are decoded by the R-S decoder 168.

In support of this statement the Examiner points to col. 1, lines 51-62, and to col. 4, lines 26-49. Applicants respectfully disagree.

The col. 1 passage cited by the Examiner teaches the notion of an accurate estimate of the channel characteristics, but it does not teach how such an estimate is obtained. The col. 4 passage cited by the Examiner teaches

> At the receiver 160 each receiver antenna, (not shown) provides its received signal to a corresponding FFT module, e.g., 1621, 1622, 162P where p equals the number of receiver antennas and thus channels. The outputs of these FFTs are shown as x_1 [n, k], x_p [n, k]. All of these received signals are supplied to a channel estimator 170. They are also supplied to their own corresponding signal adjuster, e.g., 1641, 1642, 164P. The outputs of the adjusters are coupled to a summing device 166 which yields as an output y[n, k]. This latter signal is supplied to a reference generator 175 and a demodulator 167. The output of the demodulator a[n, k] is also supplied to the reference generator and is further supplied to a decoder 168. Again, the decoder need only complement the encoder, but in the specific embodiment described the decoder is a R-S decoder. The output of the R-S decoder b[n, k], under ideal conditions, would completely match b[n, k] the input to the transmitter. The output of the R-S decoder is yet another input to the reference generator 175. The output of the reference generator 175, a[n, k], provides another input to channel estimator 170. The estimator generates adjustment parameters H[n, k], H[n, k] that adapt the receiver to the detected characteristics of the various channels.

This passage teaches that the channel estimation is obtained from signals developed by the FFTs and a signal developed by reference generator 175. Reference generator 175 effectively imparts a feedback path. However, imparting a feedback path is not tantamount to an *iterative* approach or process, which is what the rejected claims 1 and 27 clearly specify. The terms "iterative," "iteratively," "iteration" are not found anywhere in the reference, and there is no mention of any actions that involve repetition, recurrence, or reiteration. It is respectfully submitted, therefore, that outstanding claims 1, 27 and 36 are not anticipated by the Cimini Jr. et al reference.

Claims 7-12, and 30-34 were rejected under 35 USC 103 as being obvious over the aforementioned Cimini Jr. et al reference in view of Toskala et al, US Patent

6,480,554. Applicants respectfully traverse. The Toskal et al reference teaches Viterbi decoding and deinterleaving in a CDMA context, but it does not address the deficiency in the Cimini Jr. et al reference discussed above. Therefore, the combination of Cimini Jr. et al and Toskala et al does not render the outstanding claims obvious.

In view of the above amendments and remarks, applicants respectfully submit that all of the Examiner's objections and rejections have been overcome. Reconsideration and allowance of the outstanding claims are respectfully solicited.

Respectfully,
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FIG. 1A